

AraStance

A Multi-Country and Multi-Domain Dataset of Arabic Stance Detection for Fact Checking

Tariq Alhindi, Amal Alabdulkarim, Ali Alshehri, Muhammad Abdul-Mageed, Preslav Nakov
tariq@cs.columbia.edu

Contributions

- 4,063 claim-document pairs labeled for both stance and veracity
- Multi-query related document retrieval approach for claims from diverse topics in Arabic
- Comparison between three Arabic Stance Detection datasets

Data available at: <http://github.com/Tariq60/arastance>

AraStance Dataset

Claim Collection and Preprocessing (910 unique claims)

araneews

dabegad

norumors

reuters

Original Claim	Preprocessed Claim
لا صحة لما يتم تناوله حول تسجيل مكالمات و رسائل المقيمين	الحكومة تسجل مكالمات و رسائل المقيمين
<i>What is being circulated about recording residents' calls and messages is not true</i>	<i>The government is recording calls and messages of residents</i>

- Five Queries per Claim for Document Retrieval
- Claim only (with date restriction)
- + Named Entities
- Parsing-based (First VP and all preceding tokens)

طفلة تظهر بنصف جسم بشري ، النصف الاخر ثعبان
A female child with half a human body, and the other half is a snake

- Stance Annotation
- Agree, Disagree, Discuss, Unrelated
- Three Annotators (IAA=0.67)

Models

Multilingual BERT (mbert)

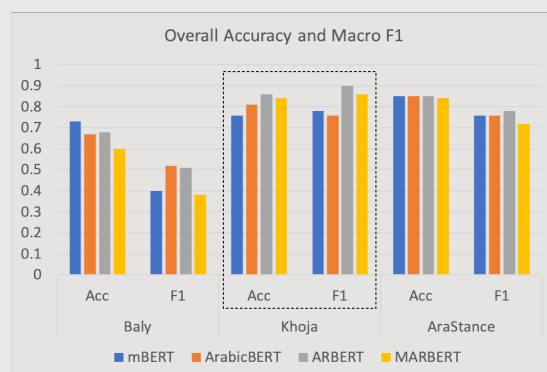
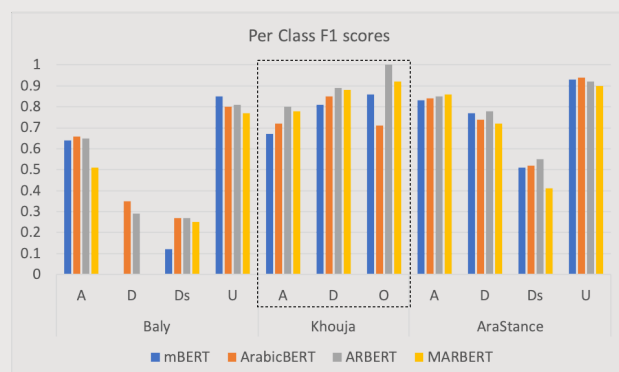
ArabicBERT (Safaya et al., 2020)

ARBERT (Abdul-Mageed et al. 2020)

MARBERT (Abdul-Mageed et al. 2020)

Source	Veracity	Claims	Articles	Agree	Disagree	Discuss	Unrelated
araneews	False	170	518	80	82	51	305
dabegad	False	278	1,413	225	249	143	796
norumers	False	158	490	26	103	32	329
rueters	True	304	1,642	691	15	161	775
Total	-	910	4,063	1,022	449	387	2,205

Results and Observations



ARBERT has the best overall and per-class on AraStance and Khouja's.

ARBERT and MARBERT are better than the other two models at predicting the stance between a pair of sentences, as it is the case with the Khouja's.

mBERT has the highest overall accuracy and F1 score for the unrelated class of Baly's